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“Step Out From the Old to the New”

IS 6569 (2004): Freight containers - Vocabulary [TED 12: Freight Containers and Pallets]



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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
भारवाही कन्टेनर — शब्दावली
(तीसरा पुनरीक्षण)

Indian Standard
FREIGHT CONTAINERS — VOCABULARY
(*Third Revision*)

ICS 01.040. 55; 55.180.10

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NATIONAL FOREWORD

This Indian Standard (Third Revision) which is identical with ISO 830 : 1999 'Freight containers — Vocabulary' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendations of the Freight Containers and Pallets Sectional Committee had been approved by the Transport Engineering Division Council.

This standard was first published in 1972 and revised in 1985. The second revision had been brought out with amalgamation of IS 6569 (Parts 1 to 4) : 1985 to align it with ISO 830 : 1981 'Freight containers — Terminology'. Subsequent to the revision in the ISO 830 : 1999, this standard has been revised to bring it in line with the revised ISO Standard.

Only English language has been retained while adopting this International Standard.

The text of ISO Standard has been approved for publication as an Indian Standard without deviations. Certain terminology and conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a full point (.) as the decimal marker.

Technical Corrigendum 1 to the above International Standard has been given at the end of this standard.

CROSS REFERENCES

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards which are to be substituted in their place are given below along with their degree of equivalence for the editions indicated. However, that International Standard cross referred in this adopted ISO Standard, which has subsequently been revised, position in respect of latest ISO Standard has been given:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 668 : 1995	IS 6566 : 2001 Series 1 freight containers — Classification, dimensions and ratings (<i>third revision</i>)	Identical
ISO 1496-1 : 1990	IS 13288 (Part 1) : 1993 Series 1 freight containers — Specification and testing: Part 1 General cargo containers for general purposes	do
ISO 1496-2 : 1996	IS 13288 (Part 2) : 2001 Series 1 freight containers — Specification and testing: Part 2 Thermal containers (<i>first revision</i>)	do
ISO 1496-3 : 1995	IS 13288 (Part 3) : 2002 Series 1 freight containers — Specification and testing: Part 3 Tank containers for liquids, gases and pressurized dry bulk (<i>first revision</i>)	do
ISO 1496-4 : 1991	IS 13288 (Part 4) : 1993 Series 1 freight containers — Specification and testing: Part 4 Non-pressurized containers for dry bulk	do

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Indian Standard

FREIGHT CONTAINERS — VOCABULARY

(Third Revision)

1 Scope

This International Standard presents definitions of terms relating to freight containers.

NOTE The different parts and components used in the construction of freight containers are specified in ISO 9897-1.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 668:1995, *Series 1 freight containers — Classification, dimensions and ratings*.

ISO 1496-1:1990, *Series 1 freight containers — Specification and testing — Part 1: General cargo containers for general purposes*.

ISO 1496-2:1996, *Series 1 freight containers — Specification and testing — Part 2: Thermal containers*.

ISO 1496-3:1995, *Series 1 freight containers — Specification and testing — Part 3: Tank containers for liquids, gases and pressurized dry bulk*.

ISO 1496-4:1991, *Series 1 freight containers — Specification and testing — Part 4: Non-pressurized containers for dry bulk*.

ISO 1496-5:1991, *Series 1 freight containers — Specification and testing — Part 5: Platform and platform-based containers*.

ISO 3874:1997, *Series 1 freight containers — Handling and securing*.

ISO 6346:1995, *Freight containers — Coding, identification and marking*.

ISO 9897:1997, *Freight containers, container equipment data exchange (CEDEX) — General communication codes*.

ISO 10374:1991, *Freight containers — Automatic identification*.

3 General terms and definitions

3.1 freight container

article of transport equipment which is

- a) of a permanent character and accordingly strong enough to be suitable for repeated use;
- b) specially designed to facilitate the carriage of goods by one or more modes of transport, without intermediate reloading;
- c) fitted with devices permitting its ready handling, particularly its transfer from one mode of transport to another;
- d) so designed as to be easy to fill and empty;
- e) having an internal volume of at least 1 m³ (35,3 ft³)

NOTE The term "freight container" includes neither vehicles nor conventional packing.

3.2

ISO container

freight container complying with all relevant ISO container standards in existence at the time of its manufacture

4 Container types

4.1 General

4.1.1 Classification

Container types (see Table 1) are grouped, and groups are subdivided according to the following concepts: mode of transport, categories of cargo, and the physical characteristics of the container. Thus:

- a) it is assumed that containers are intended for use in any or all of the surface modes of transport, i.e. road, rail and sea, unless otherwise stated;
- b) the main classification is made in terms of the type of cargo for which a container is primarily intended.

General cargo containers (see 4.2.1) include those containers which are not specifically or primarily intended for a particular category of cargo. This group is subdivided according to type of structure and/or means of access for loading (packaging) and emptying.

Specific cargo containers (see 4.2.2) include those for cargoes which are temperature-sensitive, for liquids and gases, for dry solids in bulk and for particular categories such as automobiles (cars) or livestock. This group is subdivided according to the appropriate physical attributes of the container, such as ability to maintain a particular temperature under stated conditions, test pressures, etc.

4.1.2 Type codes

Container type codes are given in ISO 6346.

The type code consists of two characters: the first, an alphabetic character, indicates the container type and the second, a numeric character, indicates the main characteristics related to the container type.

NOTE 1 A summary of container types giving reference to the relevant clauses and subclauses is given in Table 1.

NOTE 2 Neither the summary, nor the definitions which follow it, is intended to constitute an exhaustive list of container types.

NOTE 3 In 4.2.1, 4.2.2 and 4.2.3, where a reference is given in square brackets after the name of a container type, this identifies the document in which the specification and testing requirements are given for the type of container in question.

NOTE 4 When type codes are quoted with definitions, they are given as typical examples only.

4.2 Terms and definitions

4.2.1

general cargo container

freight container that is not intended for use in air transport, nor primarily intended for the carriage of a particular category of cargo such as a cargo, requiring temperature control, liquid or gas cargo, dry solids in bulk or cargoes such as automobiles (cars) or livestock

4.2.1.1

general purpose container

general cargo container that is totally enclosed and weather-proof, having a rigid roof, rigid side walls, rigid end walls and a floor, having at least one of its end walls equipped with doors and intended to be suitable for the transport of cargo of the greatest possible variety

NOTE The simplest form of this type of container is given the type code G0.

4.2.1.2
specific-purpose container

general cargo container that has constructional features either for the "specific purpose" of facilitating packing and emptying other than by means of doors at one end of the container, or for other specific purposes such as ventilation

NOTE The container types covered by this general term are those defined in 4.2.1.2.1 to 4.2.1.2.4 inclusive.

4.2.1.2.1
closed ventilated container

specific-purpose container that is totally enclosed and weatherproof, having a rigid roof, rigid side walls, rigid end walls and a floor, at least one of its end walls equipped with doors and that has devices for ventilation, either natural or mechanical (forced)

NOTE The type codes for the simplest forms of these containers are:

- V0 for those specifically designed for carriage of cargo where natural ventilation is required, and
- V2 for those having mechanical ventilation.

4.2.1.2.2
open-top container

specific-purpose container that has no rigid roof but may have a flexible and movable or removable cover, made e.g. of canvas or plastic or reinforced plastic material, normally supported on movable or removable roof bows

NOTE 1 Such containers may have movable or removable top-end transverse members above their end doors.

NOTE 2 The simplest form of this type of container is given by the type code U0.

4.2.1.2.3
platform

specific-purpose container that has no superstructure whatever, but has the same length, width, strength requirements and handling and securing features as required for interchange of its size within the ISO family of containers

NOTE Containers of this type have type code P0.

4.2.1.2.4
platform-based container

specific-purpose container that has no side walls, but has a base structure similar to that of a platform container

See 4.2.1.2.3.

4.2.1.2.4.1
platform-based containers with incomplete superstructure and fixed ends

platform-based container without any permanently fixed longitudinal load-carrying structure between ends other than at the base

NOTE Containers of this type have type codes P1 and P2.

4.2.1.2.4.2
platform-based container with incomplete superstructure and folding ends

platform-based container with incomplete superstructure (as envisaged in 4.2.1.2.4.1) but having folding end frames with a complete transverse structural connection between corner posts

NOTE Containers of this type have type codes P3 and P4.

4.2.1.2.4.3
platform-based container with complete superstructure

platform-based container with a permanently fixed longitudinal load-carrying structure between ends at the top.

NOTE 1 The term "load" as used refers to a static/dynamic type load, not a cargo load.

NOTE 2 Containers of this type have type code P5.

4.2.2
specific cargo container

general term applied to those types of container which are primarily intended for the carriage of particular categories of cargo

NOTE The term is applied to those types of container defined in 4.2.2.1 to 4.2.2.4 inclusive.

4.2.2.1

thermal container

freight container built with insulating walls, doors, floor and roof designed to retard the rate of heat transmission between the inside and the outside of the container

See ISO 1496-2.

NOTE 1 The definition of thermal container includes containers having devices for cooling, heating or atmosphere control.

NOTE 2 Terminology applicable to thermal containers is given in 7.2.

4.2.2.1.1

insulated container

thermal container having no devices for cooling and/or heating either permanently installed or attached

NOTE Containers of this type have type codes H5 and H6.

4.2.2.1.2

mechanically refrigerated container

thermal container fitted with a mechanical refrigeration unit and a heat-producing appliance

NOTE Containers of this type have type code R0.

4.2.2.1.3

refrigerated and heated container

thermal container fitted with a refrigerating appliance (mechanical or expendable refrigerant) and heat-producing appliance

NOTE Containers of this type have type codes R1 and R3.

4.2.2.2

tank container

freight container which includes two basic elements, the tank or tanks and the framework, and complies with the requirements of ISO 1496-3

See ISO 1496-3.

NOTE 1 Terminology applicable to tank containers is given in 7.3.

NOTE 2 Containers of this type have type codes T0 and T9.

4.2.2.3

dry bulk container

container for the transport of dry bulk solids, capable of withstanding the loads resulting from filling, transport motions and discharging of non-packaged dry bulk solids, having filling and discharge apertures and fittings

4.2.2.3.1

non-pressurized dry bulk container

dry bulk container permitting loading and unloading by gravity

4.2.2.3.2

pressurized dry bulk container

dry bulk container which may be loaded or unloaded by gravity or pressure discharge

NOTE 1 Terminology applicable to dry bulk containers is given in 7.4.

NOTE 2 Containers of this type have type codes B0 to B6.

4.2.2.3.3

box type

dry bulk non-pressurized container for tipping discharge, having a parallelepiped (parallelogram) cargo space and a door opening at least at one end

NOTE It therefore may also be used as a general-purpose freight container.

4.2.2.3.4

hopper type

dry bulk non-pressurized container for horizontal discharge having no door opening and therefore cannot be used as a general-purpose freight container

4.2.2.4 named-cargo types

various types of container such as automobile (car) containers, livestock containers and others, built in general accordance with ISO container requirements either solely or primarily for the carriage of a named cargo

NOTE Type code numbers have been allocated to livestock carriers (S0), automobile carriers (S1) and live fish carriers (S2), and spare numbers exist for other "named-cargo types".

5 Container characteristics

5.1 Designations

5.1.1 Size designations

For Series 1 containers, the size designations are given in Table 2.

5.1.2 Container size codes

Size codes are given in ISO 6346.

The size code consists of two characters: the first, an alphabetic or numeric character, indicates the container external length and the second, a numeric or alphabetic character, indicates the container external width and height.

5.2 Terms and definitions related to dimensions and capacities

5.2.1 External dimensions

5.2.1.1 nominal dimensions

those dimensions, disregarding tolerances and rounded to the nearest convenient whole number, by which a container may be identified

NOTE Nominal dimensions are given in ISO 668 and are commonly quoted in imperial units.

5.2.1.2 actual dimensions

maximum overall external dimensions (including positive tolerances where these are applicable) for length, width and height measured along the exterior edges of the container

NOTE Diagonal tolerances, applicable to any of the six "faces" of a container are expressed in terms of the allowable difference between the lengths of the diagonals (measured between the centres of the corner fitting apertures) of the face in question. These diagonal tolerances are allowable even when the edge dimensions for the surface in question are at their maximum values.

5.2.2 internal dimensions

dimensions of the largest unobstructed rectangular parallelepiped (parallelogram) which could be inscribed in the container if inward protrusions of the top corner fittings are disregarded

NOTE 1 Except where otherwise stated, the term "internal dimensions" is synonymous with the term "unobstructed internal dimensions".

NOTE 2 Some requirements governing internal dimensions are given in ISO 668, ISO 1496-1 and ISO 1496-2.

5.2.3 door opening

term usually reserved to define the size of the (end) door aperture, i.e. the width and height dimensions of the largest unobstructed parallelepiped (parallelogram) which could possibly be entered into the container via the door aperture in question.

NOTE 1 Minimum door openings are prescribed in ISO 1496-1 for some general purpose containers and in ISO 1496-2 for thermal containers.

NOTE 2 See definition of "opening" in 6.1.10.1.

5.2.4 internal volume

volume determined by multiplying the internal dimensions of length, width and height

NOTE Except when otherwise stated, the term "internal volume" is synonymous with the terms "unobstructed internal volume", "capacity" or "unobstructed capacity".

5.3 Terms and definitions related to ratings and masses

5.3.1
rating
R

gross mass¹⁾ of a container which is both the maximum mass for operation and the minimum mass for testing

NOTE Ratings are given in ISO 668.

5.3.2
tare mass
T

mass of empty container including all fittings and appliances associated with a particular type of container in its normal operating condition

EXAMPLE A mechanically refrigerated container with its refrigeration equipment installed and, where appropriate, full of fuel.

NOTE The term “tare” is synonymous with the term “tare mass” and the more commonly (but incorrectly) used term “tare weight”.

5.3.3
payload
P

maximum permitted mass of payload, including such cargo securement arrangements and/or dunnage as are not associated with the container in its normal operating condition

$$P = R - T$$

NOTE 1 *R*, *P* and *T*, by definition, are expressed in units of mass. Where test requirements are based on the gravitational forces derived from these values, those forces, which are inertial forces, are indicated thus:

$$R_g, P_g, T_g$$

which are expressed in newtons or multiples thereof.

NOTE 2 The word “load”, when used to describe a physical quantity to which units may be ascribed, implies mass.

The word “loading”, for example as in “internal loading”, implies force.

1) In some countries, in order to conform to current commercial practice, the term “weight” is used (incorrectly) instead of “mass”.

5.4 Terms and definitions related to capabilities

NOTE The “capabilities” defined below are by no means all of the capabilities of containers of different types but are those capabilities deemed to require definition.

5.4.1
stacking capability

ability of a container to support a certain number of fully loaded containers of the same nominal length and the same rating under the acceleration conditions encountered in ship cell structures, taking into account relative eccentricities between containers due to cell structure clearances

5.4.2
restraint capability

ability of a container to withstand those longitudinal accelerations which may be encountered in service when a container is secured by features in its base structure to an item of transport equipment

5.4.3
floor loading capability

⟨general⟩ static or dynamic loading imposed by the payload or by wheeled equipment used to pack or empty the container

5.4.4
floor loading capability

⟨freight container testing⟩ ability of a container floor to withstand loads imposed by wheeled equipment having defined characteristics.

5.4.5
rigidity

ability of a container to withstand either transverse or longitudinal racking loads of stated amounts, resulting particularly from ship movement

5.4.6
weatherproofness

ability to withstand a defined weatherproofness test

6 Terms and definitions related to container components and structures

6.1 Components

6.1.1 corner fitting

fitting located at the corner of a container providing means of supporting, stacking, handling and securing the container

6.1.2 Top- and bottom-end transverse members

6.1.2.1 top-end transverse member

transverse structural member at the top of an "end frame" of a container joining the top corner fittings of the end in question

See 6.2.3.

NOTE 1 Where mounted above end doors, these members are commonly known as "door headers", and in open-top containers such headers are often movable ("swinging" or "hinged") and sometimes completely removable.

NOTE 2 Platform-based containers with free-standing (corner) posts do not have top-end transverse members.

6.1.2.2 bottom-end transverse member

transverse structural member at the bottom of an "end frame" of a container joining the bottom corner fittings of the end in question

See 6.2.3.

NOTE Where mounted below end doors, these members are commonly known as "door sills".

6.1.2.3 ladder catwalk

area designated for safe access to the loading area or roof of unit

6.1.3 Top and bottom side rails

6.1.3.1 top side rail

longitudinal structural member at the top of a side of a container, joining top corner fittings of the side in question

NOTE In platform-based containers which are open-sided and open top, these longitudinal members may be removable, and are not necessarily intended to take longitudinal loadings. In open top containers, they may be used to support removable (or sliding) roof bows, which in turn support a canvas or plastic cover.

6.1.3.2 bottom side rail

longitudinal structural member at the bottom of a side of a container joining the bottom corner fittings of the side in question

6.1.4 corner post

vertical structural member at either side of an "end frame" of a container joining a top and a bottom corner fitting (and thereby forming a "corner structure")

See 6.2.3.

6.1.5 floor

component supporting payload of container

NOTE The floor is generally constructed from a number of planks or panels. In certain categories of thermal container, floor components may be especially designed to allow air (or gas) to be passed underneath the cargo.

6.1.6
floor bearer

component in the "base structure" of a container which supports the floor

See 6.2.1.

NOTE 1 In general cargo containers, such components are commonly laid transversely. In such cases they are also known as "cross members" or "intermediate transverse members", i.e. transverse members in the base structure, intermediate between the "bottom end transverse members" in the "end frame".

NOTE 2 In platform-based containers, transverse floor planking is sometimes supported on additional longitudinal members, in which case these may also be regarded as floor bearers.

6.1.7
roof bow

member mounted transversely across the top of a container and either forming part of a rigid roof structure or supporting flexible, removable covers, in which case the member is commonly removable, or so designed as to slide to facilitate the loading of cargo through the top of the container

6.1.8
fork pocket
fork lift pocket

reinforced pocket running transversely across the "base structure" of a freight container, piercing the bottom side rail at prescribed positions to permit the entry of the tine of a fork lift device for lifting and carrying the container

6.1.9
gooseneck tunnel

recess at one end (commonly the "front" end) of the container designed to accommodate the raised portion of a gooseneck chassis

NOTE In certain types of containers, gooseneck tunnels are provided at each end.

6.1.10 Openings, doors and covers

6.1.10.1
opening

aperture closed by a movable or removable panel of a container designed as a load-bearing structure and also to be weatherproof and reasonably airtight

NOTE The term "open" is applied where one or more of the sides, ends or the roof of a container is permanently open. This description is still applicable even when flexible covers are provided.

6.1.10.2
end door

load-bearing panel assembly located in an end wall, arranged to open or close an aperture having specified minimum width and height

See 5.2.3.

6.1.10.3
side door

load-bearing panel assembly located in a side wall, arranged to open or close an aperture of unspecified dimensions but at least big enough to allow a man to walk through

6.1.10.4
cover

flexible, removable sheet usually intended to provide a weatherproof closure to an open top, side and/or end of a container

EXAMPLES Sheet of canvas, plastic or plastic-coated cloth.

NOTE Covers are commonly called "tarpaulins" or its derivative "tarp".

6.1.10.5
vent
ventilator

aperture which permits the exchange of air between the inside of the container and the outside atmosphere

6.1.11
load-transfer area

part of the base structure of the container specifically designed to transmit a proportion or all of the container mass to the longitudinal members of the carrying vehicle

6.1.12
load-transfer zone

zone within which the load transfer area may be expected to lie

6.1.13
doubler plate

horizontal reinforcing plate adjacent to a top and/or bottom corner fitting to protect relevant container parts against possible misalignment of fixing and/or lifting devices

6.2 Structures

6.2.1
base structure
base

rigid assembly in which the components most commonly found are:

- a) four bottom corner fittings;
- b) two bottom side rails;
- c) two bottom-end transverse members;
- d) a floor and floor bearers (except in tank types);
- e) such optional features as fork lift pockets and/or a gooseneck tunnel.

C.f. note 1 in 6.2.3, "end frame".

NOTE Base structures also include load-transfer areas. These are at specified positions to allow for load transfer between the container and a carrying vehicle.

6.2.2
platform-based

typical design characteristic of having extra-heavy structural beams or deep-webbed beams on the deck of containers that have no side walls in order that they can achieve the longitudinal bending limits specified for all ISO containers

6.2.3
end frame

Assembly at each end of a container, each consisting of two top and two bottom corner fittings, two corner posts and a top and a bottom transverse member

NOTE This commonly used term overlaps with the term "base structure" to the extent that the bottom corner fitting and the bottom-end transverse member appear in both. Caution should be used in the employment of these terms to avoid possible confusion.

6.2.4
corner structure

assembly consisting of a top and a bottom corner fitting and a corner post

6.2.5
end wall

end closure of a freight container bounded by and affixed to, but not including, the end frame

NOTE 1 This is assumed, unless otherwise stated, to be fully load-bearing to the minimum extent required for the type of container in question.

NOTE 2 Reference to "equivalent structures" means structures having the same strength as end walls but not necessarily having the same weatherproofness.

NOTE 3 Reference is sometimes made to the "rear" or "front" end of a container. The "rear" end is normally taken to mean the door end and the "front" end is taken to mean the end opposite to the door end. Such terms should be avoided where a container has similar ends. If it is necessary to differentiate between the two ends, then this should be done by reference to some feature which clearly distinguishes one end from another (for example features such as markings, plates, discharge facilities, etc.).

6.2.6
side wall

side closure of a freight container bounded by and affixed to, but not including, top and bottom side rails and corner structures

See note 2 in 6.2.3.

NOTE 1 Side walls are assumed, unless otherwise stated, to be load-bearing to the minimum extent required for the type of container in question.

NOTE 2 Reference to "equivalent structures" means structures having the same strength as side walls but not necessarily the same weatherproofness.

NOTE 3 The term "side frame" is occasionally used, but since it cannot be defined without considerable overlap with the much more commonly used terms "end frame" and "base structure", its use is to be discouraged except for tank containers.

6.2.7
roof

rigid weatherproof structural assembly forming the top closure of a container, bounded and supported by the top end transverse members, top side rails and top corner fittings

NOTE Although they are rigid assemblies, roofs may in some cases be removable.

7 Terms and definitions applicable to certain container types

7.1 Platform-based containers

7.1.1
interlocked pile

number of platform containers or folding platform-based containers, with ends folded down, which are interlocked with each other to form a unit (module)

7.1.2
incomplete superstructure

lack of any permanently fixed longitudinal load-carrying structure between the ends, other than at the base

7.1.3
fixed complete end structure

non-folding end frame with transverse structural connection between corner posts

7.1.4
folding complete end structure

folding end frame with a transverse structural connection between corner posts

7.2 Thermal containers

7.2.1
removable equipment

refrigerating and/or heating appliance, power generation unit or other equipment designated primarily for attaching to or detaching from the (thermal) container

7.2.1.1
located internally

totally within the external dimensional envelope of the (thermal) container as defined in ISO 668

7.2.1.2
located externally

partially or totally outside the external dimensional envelope of the (thermal) container as defined in ISO 668.

NOTE It is implicit in this definition that any appliance located externally be removable or retractable to allow or facilitate transport in certain modes.

7.2.2
batten

member protruding from an inside wall of the (thermal) container to hold the cargo away from the wall to provide an air passage

NOTE A batten may be integral with the wall, fastened to the wall, or added during cargo packing.

7.2.3
bulkhead

partition in a (thermal) container providing a plenum chamber and/or air passage for either return or supply air

NOTE It may be an integral part of the appliance or a separate member.

7.2.4**ceiling air duct**

passage or passages in a (thermal) container located in proximity to the ceiling to direct air flow

7.2.5**floor air duct**

passage or passages in a (thermal) container located beneath the cargo support surface to direct air flow

7.2.6**pin mounting**

mounting system using two vertical pins engaging mating sockets which are built into the top-end transverse member such that the entire mass of the removable equipment is supported by the top-end transverse member

7.2.7**lower mounting points**

threaded receptacles to which the lower two corners of the removable equipment are fastened

7.2.8**modified-atmosphere fitting**

appliance located in a thermal container which allows replacement of the natural atmosphere within the container by an artificial one after loading and closing the container.

7.2.9**controlled-atmosphere fitting**

appliance located in a thermal container which allows continuous maintenance of a more desirable atmosphere within the container

7.3 Tank containers**7.3.1****framework**

tank mountings, end structure and all loadbearing elements not present for the purposes of containing cargo, which transmit static and dynamic forces arising out of the lifting, handling, securement and transporting of the tank container as a whole

7.3.2**tank**

vessel and associated piping and fittings which are designed to confine the cargo carried

7.3.3**compartment**

section of the tank formed by the shell, ends or complete bulkheads.

NOTE Baffles, surge plates or other perforated plates do not form tank compartments within the meaning of this definition.

7.3.4**gas**

fluid substance having a vapour pressure greater than an absolute pressure of 300 kPa at 50 °C, or as otherwise defined by the competent authority

7.3.5**liquid**

fluid substance having a vapour pressure not greater than an absolute pressure of 300 kPa at 50 °C, or as otherwise defined by the competent authority

7.3.6**competent authority**

authority (or authorities) designated as such in each country and in each specific case by the governments concerned for the approval of tank containers

NOTE This definition is also applicable to dry bulk containers (7.4).

7.3.7**dangerous goods**

those substances classified as dangerous by the United Nations Committee of Experts on the Transport of Dangerous Goods, or by the competent authority as defined in 7.3.6

NOTE This definition is also applicable to dry bulk containers (7.4).

7.3.8**maximum allowable working pressure**

that pressure assigned for operation by either a competent authority or other responsible person to a particular tank and above which that tank is not intended to be operated

7.3.9**test pressure**

gauge pressure at which the tank is tested

7.3.10**total capacity**

that volume of water which will completely fill the tank at 20 °C

7.3.11

ullage

that portion of the "total capacity" of the tank not occupied by its cargo

NOTE It is expressed as a percentage of that total capacity.

7.3.12

interface

identifiable area adjacent to an external area

7.3.13

connection

specific point within an interface area used to join to a similar external point

7.4 Dry bulk containers

7.4.1

dry bulk

assemblies of separate solid particles, normally in contact with one another, which are or can be made capable of fluid flow

7.4.2

opening for cargo loading

opening provided in a container for the filling of dry bulk solids

7.4.3

opening for cargo discharging

opening provided in a container for the discharge of dry bulk solids

7.4.4

interface for external fumigation device

point(s) at which the connection between the container and any external fumigation device is connected or disconnected

7.4.5

bulk density

mass per unit volume of a dry bulk solid, measured when the dry bulk solid is in loose or non-compacted condition

7.4.6

cargo space

space bounded by the container walls or shell when all apertures are closed

8 Definitions applicable to container handling and securing, visual identification and automatic identification

8.1 Handling and securing

8.1.1

empty container

container in tare condition

8.1.2

loaded container

container in other than tare condition

8.1.3

eccentricity of centre of gravity

longitudinal and/or lateral horizontal differences between the centre of gravity of any container (empty or loaded, with or without fittings and appliances) and the geometric centre of the diagonals of the centres of the four bottom corner fittings

8.1.4

mobile centre of gravity

centre of gravity of a container loaded with liquid, bulk, hanging or similar cargo which is liable to shift under dynamic conditions

8.2 Visual identification

8.2.1

identification system

identification system consisting of all, and only, the following:

- owner code: three letters;
- equipment category identifier: one letter;
- serial number: six numerals;
- check digit: one numeral.

8.2.2

owner code

code, consisting of three capital letters, which is unique and is registered with the International Container Bureau, either directly or through an affiliated national registration organization

NOTE BIC — Bureau International des Conteneurs.

8.2.3

equipment category identifier

identifier consisting of one capital letter of the Latin alphabet as follows:

- U for all freight containers
- J for detachable freight container-related equipment
- Z for trailers and chassis

8.2.4

serial number

identification number consisting of six Arabic numerals

NOTE If the series of significant numerals does not total six, they shall be preceded by sufficient zeroes to make up six numerals. For example, if the significant series of numerals is 1234, the serial number should be 001234.

8.2.5

check digit

digit which provides a means of validating the transmission accuracy of the owner code, equipment category identifier and the serial number of the container

8.3 Automatic identification

8.3.1

physically and electronically secure

capable of meeting the operational requirements specified in ISO 10374 after successfully completing the tests specified

8.3.2

physically tamper-proof

designed such that malicious disassembly and re-assembly, using commonly available tools, will be detected upon visual inspection

8.3.3

electronically tamper-proof

designed such that malicious modification of electronically stored information by subjection to

electromagnetic signals from commonly available electronic devices is not possible

8.3.4

tag

identification label attached to a container or container-related equipment which, *inter alia*, gives the unique owner's code and serial number and which can be remotely read by electronic sensing devices

8.3.5

range

distance between the electronic sensing equipment and the identification tag

8.3.6

passing speed

speed at which a tag passes the sensing equipment

8.3.7

container movement status

information which indicates the position, speed or direction of the container relative to the sensing equipment

8.3.8

AEI system reliability

ability of an AEI system to capture mandatory information from every tag which is mounted, programmed and presented in accordance with ISO 10374, and which enters its coverage area under environmental conditions as specified

NOTE AEI is the abbreviation for "automatic electronic identification".

8.3.9

AEI system accuracy

capability of the AEI system to detect any misinterpretation of mandatory information, including bit errors

NOTE It is assumed that the defined conditions for system reliability are met.

Table 1 — Summary of container types

Type	Reference to text
Surface mode containers a) General cargo containers 1) General purpose containers 2) Specific purpose containers — closed ventilated containers — open top containers — platform (containers) — platform based containers — with incomplete superstructure and fixed ends — with incomplete superstructure and folding ends — with complete superstructure b) Specific cargo containers 1) Thermal containers 2) Tank containers 3) Dry bulk containers (non pressurized) 4) Named cargo types	4.2.1 4.2.1.1 4.2.1.2 4.2.1.2.1 4.2.1.2.2 4.2.1.2.3 4.2.1.2.4 4.2.1.2.4.1 4.2.1.2.4.2 4.2.1.2.4.3 4.2.2 4.2.2.1 4.2.2.2 4.2.2.3 4.2.2.4

Table 2 — Classification and designation

Freight container designation	Nominal length ^{a, b, c}	
	m	ft
1AAA 1AA 1A 1AX	12	40
1BBB 1BB 1B 1BX	9	30
1CC 1C 1CX	6	20
1D 1DX	3	10
<p>^a In certain countries there are legal limitations to the overall length of vehicle and load.</p> <p>^b Series 1 freight containers have a uniform width of 2 438 mm (8 ft).</p> <p>^c Containers 2 896 mm (9 ft 6 in) in height are designated 1 AAA and 1 BBB. Containers 2 591 mm (8 ft 6 in) in height are designated 1AA, 1BB and 1CC. Containers 2 438 mm (8 ft) in height are designated 1A, 1B, 1C and 1D. Containers less than 2 438 mm (8 ft) in height are designated 1AX, 1BX, 1CX and 1DX.</p> <p>NOTE The letter "X" used in the designation has no specific connotation other than to indicate that the height of the container is between 0 and 2 438 mm (8 ft).</p>		

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TECHNICAL CORRIGENDUM 1

Technical Corrigendum 1 to International Standard ISO 830:1999 was prepared by Technical Committee ISO/TC 104, *Freight containers*.

Page 3

Add new subclause 3.3 with the following text:

3.3

load

physical quantity, to which units may be ascribed, implying mass

Page 3

Add new subclause 3.4 with the following text:

3.4

loading

physical quantity, to which units may be ascribed, implying force

EXAMPLE Internal loading.

Page 6

Replace the existing NOTE 1 in 4.2.1.2.4.3 with the following text:

NOTE 1 The term "load" as used refers to a static/dynamic loading, as imposed by the cargo (mass).

Page 11

Delete NOTE 2 in 5.3.3.

Page 16

Replace subclause 6.1.11 with the following text:

load-transfer areas

part of the base structure of the container specifically designed to transmit a portion or all of the gravitational and inertial forces of the cargo and container mass to the longitudinal members of the carrying vehicle

(Continued from second cover)

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 1496-5 : 1991	IS 13288 (Part 5) : 2002 Series 1 freight containers — Specification and testing: Part 5 Platform and platform based containers (<i>first revision</i>)	Identical
ISO 3874 : 1997	IS 7622 : 2001 Series 1 freight containers — Handling and securing (<i>second revision</i>)	do
ISO 6346 : 1995	IS 6928 : 2001 Freight containers — Coding, identification and marking (<i>third revision</i>)	do
ISO 9897 : 1997	IS 13731 : 2003 Freight containers, container equipment data exchange (CEDEX) — General communication codes	do
ISO 10374 : 1991	IS 13699 : 1993 Freight containers — Automatic identification	do

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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